

REMARKS

Applicants wish to thank the Examiner for considering the present application. Claims 1-7 and 19 have been canceled. Claims 8-18 and 20 are pending in the application. Applicants respectfully request the Examiner for a reconsideration of the rejections.

Claims 8-18 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over *Drain* (U.S. Patent 5,979,832) in view of *McLeod* (U.S. Patent 3,618,097). Applicants respectfully traverse.

Claim 8 is directed to the use of at least four medium earth orbit satellites in the same orbit. By providing the satellites at in medium earth orbit, higher latitudes from those in a low earth orbit may be reached. This may be achieved without utilizing the scarce geostationary orbital positions and while enabling the reuse of geostationary frequencies. Claim 8 also includes a first ground terminal having a fixed one-dimensional antenna and a second ground terminal having a two-dimensional tracking antenna.

The Examiner cites the *Drain* reference for disclosing four satellites that are on medium earth orbit and on the equatorial plane. Applicants admit that a number of satellites are illustrated in *Drain* and that they may be MEO satellites.

The *McLeod* reference does not teach at least four satellites in a medium earth orbit spaced apart in a first configuration or combining the antennas disclosed therein with such a configuration. The *McLeod* reference teaches a both a one and a two-dimensional antenna array. These appear to be two different embodiments disclosed in one patent that are not used together in one satellite system. That is, there is no teaching or suggestion for providing a one-dimensional antenna and a two-dimensional tracking antenna together in one communication system with at least four MEO satellites. Typical systems use one type of antenna and not both types. The Examiner has formed an impermissible hindsight reconstruction of the system of the

invention using claim 8 as a guide. However, even when combined, both two-dimensional and one dimensional antennas are not set forth in one system. Therefore, Applicants respectfully request the Examiner to reconsider the rejection of claim 8.

Dependent claims 10-15 are allowable for at least the same reasons set forth in claim 8. Claim 16 recites a second plurality of satellites are interleaved between the at least four satellites in the medium earth orbit to increase the elevation angle at the most populated elevations. Claim 16 was amended to clarify that interleaving takes place in the same earth orbit. The Examiner merely points to the Draim reference for interleaving. However, the Draim reference appears to teach two rings of satellites in different orbits. For example, satellite 128 is not interleaved between satellites 112 and 114 since they are not in the same orbit.

Claim 17 was also amended in a similar manner to emphasize that the same medium earth orbit is used by the interleaved satellites. Therefore, applicants respectfully submit that claims 16 and 17 are allowable.

Claim 18 has been amended to depend from claim 8 and recites additional satellites in an inclined medium earth orbit. This claim depends from claim 8 and is also believed to be allowable for the same reasons set forth above in claim 8.

Applicants respectfully request the Examiner to provide a patent for the Official Notice that MEO satellites are inclined.

Claim 20 recites that the at-least four satellites are in the equatorial plane. The Examiner has failed to cite a reference wherein these four medium earth orbit satellites are disposed in the equatorial plane to provide semi-global coverage. Therefore, Applicants respectfully submit that claim 20 is allowable.

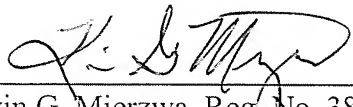
CONCLUSION

In light of the remarks above, Applicants submit that all objections and rejections are now overcome. The application is now in condition for allowance and expeditious notice thereof is earnestly solicited. Should the Examiner have any questions or comments which would place the application in better condition for allowance, the Examiner is respectfully requested to contact the undersigned attorney.

Should any fees be associated with this submission, please charge Deposit Account 50-0383.

Respectfully submitted,

Dated: 12/11/07

By: 
Kevin G. Mierzwa, Reg. No. 38,049
Attorney for Applicants

The DIRECTV Group, Inc.
2230 East Imperial Highway
P.O. Box 956
El Segundo, CA 90245
Telephone: (310) 964-0735
Facsimile: (310) 964-0941